Patent Claims

1. Peristaltic pump, with a rotor (3) received in a housing, which is provided with at least one rotatably supported conveyor roller (33a, 33b, 33c), as well as with a tubing holder (2) for receiving of at least one flexible tubing section (43) that is squeezable by the conveyor roller (33a, 33b, 33c) for peristaltically conveying a medium, characterized in that the tubing holder (2) is provided with a tubing bed body member (25) for receiving of at least one flexible tubing section (43), whereby the inlet and/or the outlet region (35, 36) of the tubing bed body member (25) is designed such that the cross sectional area of the tubing relevant for the conveying is continuously decreased and increased, respectively, by the conveyor roller (33a, 33b, 33c) rolling over the particular tube section (43).

2. Pump according to claim 1, characterized in that the tubing bed body member (25), in the inlet region (35), passes over from a convex shape to a concave shape in a smooth transition, as seen in the sense of rotation.

3. Pump according to claim 1 or 2, characterized in that the tubing bed body member (25), in the outlet region (36), passes over from a concave shape to a convex shape in a smooth transition, as seen in the sense of rotation.

4. Pump according to one of the preceding claims, characterized in that at least two conveyor rollers (33a, 33b, 33c) are provided, and that, with regard to the axis of rotation of the rotor (3), the inlet region (35) is located with regard to the outlet region (36) such that, if one of the conveyor rollers (33a) is in the inlet region (35), another conveyor roller (33c) simultaneously is in the outlet region (36).

5. Pump according to one of the preceding claims, characterized in that the tubing bed body member (25) is designed essentially in the shape of an omega.

6. Pump according to one of the preceding claims, characterized in that the tubing bed body member (25) at least partially and coaxially enlaces the rotor (3).

7. Pump according to one of the preceding claims, characterized in that the tubing bed body member (25), together with a support frame (1), constitute the housing of the pump, whereby the tubing bed body member has two legs (2a, 2b) at its end which are resiliently elastic in radial direction and provided with notch elements, by means of which the tubing bed body member (25) can be snapped into cut-outs (13) on the support frame (1) in the sense of a snap-on connection.

8. Pump according to one of the preceding claims, characterized in that the tubing bed body member (25) is designed such that its dimensional stability and fixation at the support frame (1) is supported, in addition to the elastically resilient inherent tenseness of the legs (2a, 2b), by the mutual force action of the squeezed tubing section and the squeezed tubing sections (43), respectively.

9. Pump according to one of the preceding claims, characterized in that the tubing bed body member (25) is provided with a plurality of radially and/or axially extending reinforcing ribs (23, 24).

10. Pump according to one of the preceding claims, characterized in that the inner side of the tubing bed body member (25) is provided with a multitude of groove-like recesses (21) for receiving and guiding a plurality of tubing sections (43).

11. Pump according to one of the preceding claims, characterized in that the particular conveyor roller (33a, 33b, 33c) is in the shape of a barrel and extends in axial direction over the groove-like recesses (21).

12. Pump according to one of the preceding claims, characterized in that the particular tubing section is led into and out of the tubing bed body member (25) in substantially tangential direction.

13. Pump according to one of the preceding claims, characterized in that the rotor (3) is provided with at least two conveyor rollers (33a, 33b, 33c), and that the tubing bed body member (25) coaxially enlaces the rotor (3) by an amount of 360° divided by the number of conveyor rollers.

14. Pump according to one of the claims 1 to 12, characterized in that the rotor (3) is provided with three conveyor rollers (33a, 33b, 33c), and that the inlet portion (35) is offset around the axis of rotation of the rotor (3) with regard to the outlet portion (36) by 210° to 270°, preferably by approximately 240°.